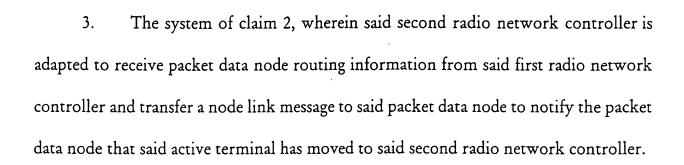## WHAT IS CLAIMED IS:

1.   A system for controlling a packet data service in a mobile communication network, comprising:

a plurality of radio network controllers, wherein each of said radio network controllers assigns a radio channel to a packet data service active terminal and controls a data service path for said active terminal; and

a location management unit that manages service state information, location information and connection information of said active terminal;

wherein, when said active terminal moves from a first one of said radio network controllers to a second one of said radio network controllers in a suspended state or a dormant state, medium access control layer state information and radio resource control information of said active terminal are maintained between said first and second radio network controllers under control of said location management unit.

2.   The system of claim 1, further comprising a packet data node for maintaining a point-to-point protocol link with said active terminal through a serving one of said radio network controllers to process one of an incoming signal from said active terminal and an outgoing signal to said active terminal.

3.   The system of claim 2, wherein said second radio network controller is adapted to receive packet data node routing information from said first radio network controller and transfer a node link message to said packet data node to notify the packet data node that said active terminal has moved to said second radio network controller.

4.   The system of claim 1, further comprising a mobile switching center and a visitor location register, wherein said location management is provided in said mobile switching center and visitor location register.

5.   The system of claim 4, further comprising a packet control function entity adapted to establish a virtual circuit between a serving one of said radio network controllers and one of a target one of said radio network controllers and a packet data node, wherein said packet control function entity is provided said mobile switching center and visitor location register.

6.   The system of claim 1, wherein said suspended state is a state where a traffic channel, a power control channel and a radio resource control channel are released between said active terminal and a serving one of said radio network controllers, and wherein a radio link protocol state and a point-to-point protocol state are maintained between said active terminal and said serving radio network controller; and

wherein said dormant state is a state where a radio connection is released between said active terminal and said serving radio network controller and only said point-to-point protocol state is maintained between said active terminal and a packet data node.

7.   The system of claim 1, wherein said mobile communication network is an IMT-2000/PCS/cellular communication network.

8.   In a radio communication network that includes a plurality of radio network controllers, a method for operating a mobile communication network, comprising:

        a)   moving a packet data service active terminal from an old one of said radio network controllers to a new one of said radio network controllers in at least one of a suspended medium access control (MAC) layer state and a dormant MAC layer state;

        b)   transferring MAC layer state information and radio resource control information of said active terminal from said old radio network controller to said new radio network controller through a location management function entity; and

        c)   maintaining said MAC layer state information and radio resource control information of said active terminal between said old and new radio network controllers.

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9.   The method of claim 8, wherein the location management device is in a mobile switching center and provides radio packet data service.

10.   A method for controlling a packet data service in a mobile communication network of a radio communication network that includes a plurality of radio network controllers, at least one location management function device and a packet data node to provide a radio packet data service, the method comprising the steps of:

a)   allowing a packet data service active terminal to move from a current one of said radio network controllers to a target one of said radio network controllers under the condition that only a point-to-point protocol state is maintained between said active terminal and said packet data node;

b)   allowing said active terminal to detect a received pilot signal and check a system overhead message;

c)   allowing said active terminal to determine whether to perform a handoff operation at a suspended state; and

d)   allowing said active terminal to request said current radio network controller to permit its change to one of a dormant state and an active state when the determination is that said active terminal is to perform the handoff operation in said suspended state.

11.   The method of claim 10, further comprising the step of allowing said current radio network controller to transfer radio link protocol state information and radio resource control information of said active terminal to said target radio network controller under control of said location management function entity if said active terminal is changed to said dormant state.

12.   The method of claim 10, wherein when said current radio network controller is changed to said dormant state, the method further comprises the step of allowing said location management function entity to transfer an overhead message to said target radio network controller to notify the target radio network controller that an inter-radio network controller handoff operation is executed.

13.   The method of claim 12, wherein when said active terminal is not to perform the handoff operation in said suspended state, the method further comprises the step of allowing said current radio network controller to detect a location of said active terminal and prevent the change to said dormant state.

14.   The method of claim 10, wherein the location management function device is in a mobile switching center.

15.   The method of claim 10, wherein the mobile communication network is an

IMT-2000/PCS/cellular communication network.